Trend Study 8A-1-00

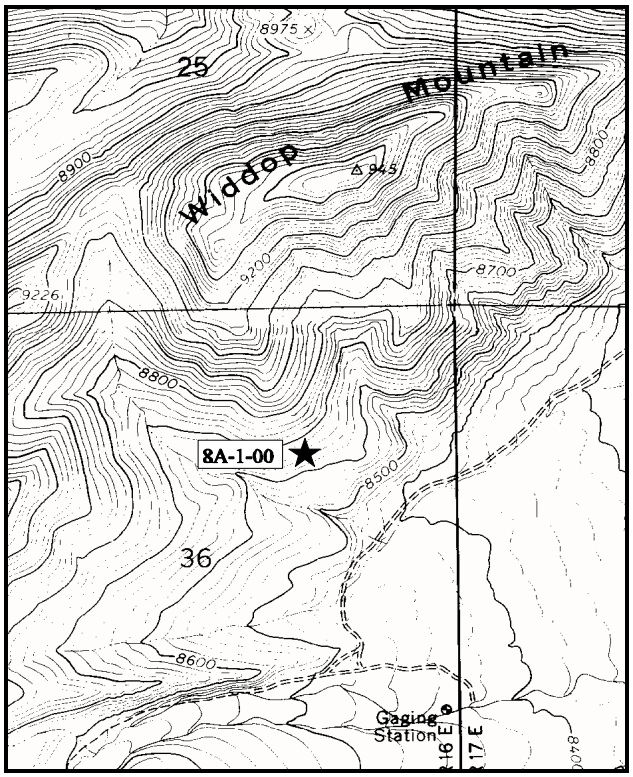
Study site name: Widdop Mountain South Slope . Range type: True Mountain Mahogany .

Compass bearing: frequency baseline 154°M .

First frame placement on frequency belts 5 feet. Frequency belt placement; line 1 (11 & 95ft), line 2 (34ft), line 3 (59ft), line 4 (71ft).

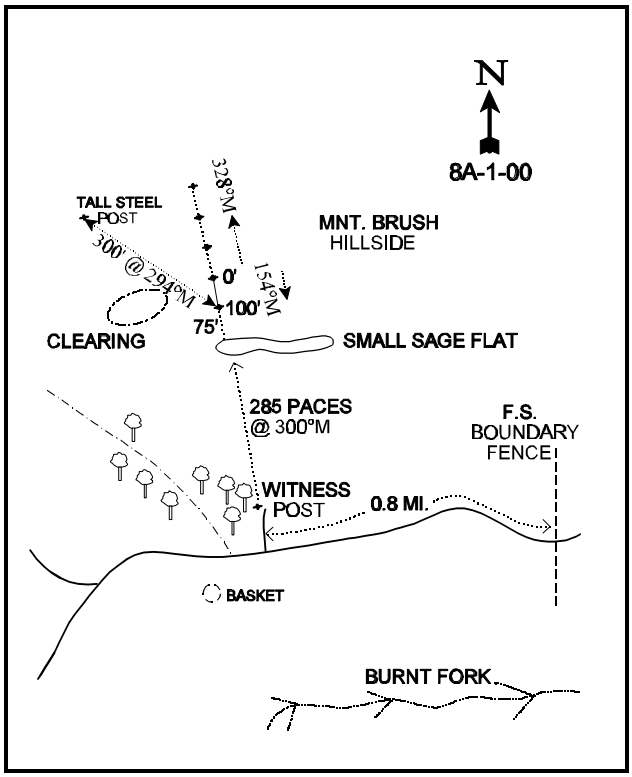
LOCATION DESCRIPTION

Two miles south of the Wyoming-Utah state line, on the Hoop Lake Road along the Middle Fork of Beaver Creek, turn east toward Gregory Basin. Go 0.6 miles to a private property fence. Continue east 1.1 miles, going past a cabin to a fence. Go 0.1 miles to a fork, continue straight. Go 0.4 miles to an old 4-way intersection south of Gregory Basin. Continue east for 0.7 miles to the FS boundary fence. Go 0.9 miles (past study 8A-2-00) to another FS fence. Continue 1.8 miles to a gate. Go through the gate and 0.4 miles to a fork. Bear right. Go 2.3 miles SW back to a FS boundary fence. Proceed 0.8 miles to a faint fork. Turn right and pull up about 50 yards along a small drainage. Stop by a witness post (tall green fencepost) next to a clump of aspens. From here, hike NW 500 yards up the slope. The 0-foot baseline stake is marked by browse tag #7155.



Map Name: Hoop Lake

Township 3N , Range 16E , Section 36



Diagrammatic Sketch

UTM 4533803 N, 578141 E

DISCUSSION

Trend Study No. 8A-1

The Widdop Mountain South Slope study is located on the south side of Widdop Mountain. The open mountain mahogany slope overlooks large sagebrush parks in the Burnt Fork drainage. The elevation at the site is 8,650 feet. It is on a moderately steep (26%), south-facing, well-drained slope. The land is administered by the Wasatch National Forest which is permitted for summer cattle grazing. The cows tend to stay in the valley bottom near water, so livestock use is light on the brushy mountain slopes. These slopes receive the most use from wintering elk as evidenced by the higher quadrat frequency of elk pellet groups. Pellet group transect data from 2000 estimate moderate elk use at 66 elk days use/acre (163 edu/ha). There is also indications of light use by moose and deer (see pellet group table). In 2000, nearly all of the deer pellet groups appeared to be from the fall, while most of the elk use seemed to be from winter, and moose use primarily from spring.

The soil is a moderately deep, rocky, sandy loam with an effective rooting depth of nearly 13 inches. Soil depth measurements (effective rooting depth) were deepest near serviceberry and mahogany plants. The soil profile contains a light colored horizon at approximately 3 to 6 inches in depth that contains calcium carbonate particles. Rock cobble and gravel are common on the soil surface and concentrated in the top 12 inches of the soil. Parent material consists of limestone and sandstone colluvially deposited from Widdop Mountain. Some limited soil movement is apparent in the form of soil pedestalling on the uphill side of shrubs and some terracing on the steeper slopes. However, erosion is not a problem on the site due to the abundant vegetation and litter cover.

True mountain mahogany is the key browse species which provided 84% of the browse cover in 1995 and 79% in 2000. During the 1995 reading, the proportion of mature plants increased, while the number of plants in all other form classes declined. The biggest decline was in the number of young plants which were abundant in 1988. The young plants counted in 1988, apparently got established during the favorable wet years of 1983 and 1984. Drought conditions that followed have reduced the number of seedlings and young within the population. Young plants accounted for about 56% of the mahogany population in 1988, declining to 27% and 29% in 1995 and 2000 respectively. Few seedlings were sampled in 1995 or 2000. Use of the more palatable mahogany has been moderate to heavy during all years, although slightly heavier in 2000. However, percent decadence is low and vigor is normal for most plants. Some insect damage was noted in 1995, with the dry conditions of 2000, some mahogany leaves have started to dry out and turn yellow by early August. Some of the heavy use reported in 2000 may be partly due to poor annual leader growth caused by the extremely dry conditions. Average annual leader growth was only 3 inches for mahogany.

Additional browse forage is provided by serviceberry, mountain big sagebrush, winterfat, bitterbrush and snowberry. Patches of sagebrush tend to dominate the more level areas on the hillside. Smaller plants like low rabbitbrush, horsebrush, and especially broom snakeweed, are fairly common yet unimportant as forage.

The abundant and well established grasses provided 34% of the vegetation cover in 1995 and 36% in 2000. Bluebunch wheatgrass is especially abundant on this site. A small sedge is also very common. These two species provided 84% of the grass cover in 1995 and 92% in 2000. Indian ricegrass is moderately abundant, while other grasses are found only occasionally. A good variety of forbs are present on the site. None are noteworthy except for thistle which appears to be increasing in the open areas, and the preferred low penstemon and flax.

1995 TREND ASSESSMENT

Since vegetative cover was estimated differently in 1995 than in 1988, care should be taken when directly comparing basic vegetation cover from the earlier readings. In 1988, points on the quadrat were used to estimate cover. As a result, only basal vegetation cover was estimated. In 1995, aerial cover for vegetation was estimated for all ground cover categories which can usually total more 100%. Refer to the methods section of this report for further information on the methods.

Ground cover characteristics haven't changed a great deal on this site. Percent bare ground has declined slightly while litter cover has gone down moderately due to drought. Erosion does not appear to be a problem on the site due to the abundant herbaceous vegetation which provides 44% of the vegetative cover. The high values for nested frequency for vegetation and litter (347 and 388 out of a possible 400) suggest well dispersed protective cover. Trend for soil is currently considered stable. Trend for the key browse species, true mountain mahogany, is mixed. On the positive side, percent decadency is less than one percent, but it was already low at 6% in 1988. The proportion of shrubs displaying heavy hedging has also declined while generally showing good vigor. On the slightly downward side, the numbers of seedlings and young have declined, but this is not critical for a fairly long-lived species. The large number of young plants and noted decline is most likely due to the wet years in the early to mid-1980's followed by several years of drought. Differences in young and seedling plants may also be to the much larger sample used in 1995 which more accurately estimates shrub populations. This trend is common throughout the herd unit and in other areas of the state. Trend for browse on the site is considered stable due to the low decadency rate, adequate reproductive potential (27%), stable vigor and reduced heavy hedging.

Trend for the herbaceous understory is slightly down due to a decline in sum of nested frequency for both perennial grasses and forbs. This is also a common trend through out the state during these drought years. Nested frequency of bluebunch wheatgrass increased significantly while frequency of most of the other perennial grasses declined.

TREND ASSESSMENT
soil - stable (3)
browse - stable but reduced reproductive potential (3)
herbaceous understory - slightly down (2)

2000 TREND ASSESSMENT

Trend for soil is fairly stable. Erosion is not a problem on the site due to the abundant and well dispersed vegetation and litter cover. Trend for the key browse species, true mountain mahogany, is also stable. Utilization is somewhat heavier than 1995 estimates. However, percent decadence is relatively low at 10%, vigor is normal on most plants, and 29% of the population consists of young plants. Some of what appears as increased use may be due to poor leader growth on mahogany in response to the extremely dry conditions of this growing season. Poor leader growth makes shrubs appear to be more heavily used. Trend for the herbaceous understory is stable with similar sum of nested frequencies for perennial grasses and forbs compared to 1995.

TREND ASSESSMENT
soil - stable (3)
browse - stable (3)
herbaceous understory - stable (3)

HERBACEOUS TRENDS --
Herd unit 08A, Study no: 1

Type	Species	Nested Frequency			Quadrat Frequency			Average Cover %	
		'88	'95	'00	'88	'95	'00	'95	'00
G	Agropyron dasystachyum	a-	ab3	b12	-	1	5	.03	.10
G	Agropyron spicatum	a233	b286	b276	86	94	94	9.56	12.51
G	Bromus inermis	a-	b10	ab2	-	3	1	.06	.00
G	Carex spp.	b188	a136	ab157	76	57	65	3.57	6.02
G	Festuca ovina	-	-	4	-	-	2	-	.03
G	Koeleria cristata	b60	ab45	a26	26	21	12	.58	.23
G	Leucopoa kingii	b23	a10	a10	11	4	5	.02	.07
G	Oryzopsis hymenoides	b65	ab59	a42	33	26	18	1.72	1.34
G	Poa fendleriana	a-	b14	a-	-	6	-	.08	-
G	Poa secunda	-	-	1	-	-	1	-	.00
G	Stipa comata	c40	b6	a-	19	3	-	.09	-
Total for Annual Grasses		0	0	0	0	0	0	0	0
Total for Perennial Grasses		609	569	530	251	215	203	15.72	20.34
Total for Grasses		609	569	530	251	215	203	15.72	20.34
F	Arabis spp.	-	3	-	-	1	-	.03	-
F	Aster chilensis	b10	b4	a-	4	3	-	.06	-
F	Astragalus spp.	3	-	1	2	-	1	-	.03
F	Calochortus flexuosus	a-	b7	ab2	-	4	1	.07	.00
F	Chaenactis douglasii	-	1	6	-	1	2	.00	.01
F	Chenopodium leptophyllum (a)	-	2	-	-	2	-	.01	-
F	Cirsium spp.	59	48	57	32	25	28	1.62	1.47
F	Comandra pallida	1	1	-	1	1	-	.03	-
F	Cryptantha spp.	a42	b90	ab71	21	37	34	1.04	.94
F	Cymopterus spp.	-	-	1	-	-	1	-	.00
F	Descurainia pinnata (a)	a14	b54	a1	8	23	1	.22	.03
F	Eriogonum umbellatum	-	-	1	-	-	1	-	.00
F	Hymenoxys acaulis	2	-	-	2	-	-	-	-
F	Lesquerella alpina	b40	a19	ab40	20	11	23	.05	.31
F	Leucelene ericoides	21	10	15	8	4	6	.02	.13
F	Linum lewisii	a2	a5	b21	2	2	9	.03	.12
F	Lithospermum ruderale	a8	b26	b28	4	15	14	.39	.40
F	Machaeranthera canescens	-	-	1	-	-	1	-	.00
F	Machaeranthera grindelioides	a4	b18	b25	2	10	11	.20	.48
F	Penstemon humilis	b96	a38	a30	48	19	17	.24	.45
F	Phlox hoodii	b51	ab34	a34	24	16	17	.42	.60
F	Senecio multilobatus	b30	a6	b26	13	3	15	.01	.37

Type	Species	Nested Frequency			Quadrat Frequency			Average Cover %	
		'88	'95	'00	'88	'95	'00	'95	'00
F	Taraxacum officinale	$_{a}$-	$_{b}$10	$_{a}$2	-	6	1	.03	.03
F	Tragopogon dubius	-	-	1	-	-	1	-	.00
F	Zigadenus paniculatus	4	6	1	3	2	1	.01	.00
Total for Annual Forbs		14	56	1	8	25	1	0.23	0.03
Total for Perennial Forbs		373	327	363	186	161	184	4.30	5.38
Total for Forbs		387	383	364	194	186	185	4.53	5.41

Values with different subscript letters are significantly different at % = 0.10

BROWSE TRENDS --
Herd unit 08A, Study no: 1

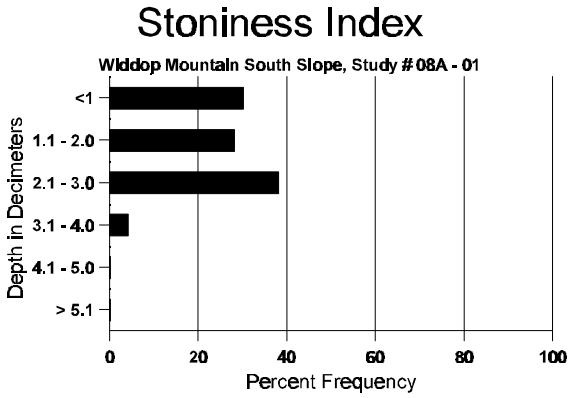
Type	Species	Strip Frequency		Average Cover %	
		'95	'00	'95	'00
B	Amelanchier alnifolia	6	5	1.06	1.52
B	Artemisia frigida	7	10	.03	.18
B	Artemisia tridentata vaseyana	5	6	.66	1.00
B	Ceratoides lanata	2	1	.00	-
B	Cercocarpus montanus	93	93	21.65	24.07
B	Chrysothamnus depressus	1	0	-	-
B	Chrysothamnus nauseosus hololeucus	0	1	-	-
B	Chrysothamnus viscidiflorus lanceolatus	23	24	.48	.33
B	Eriogonum microthecum	16	12	.12	.34
B	Gutierrezia sarothrae	26	60	.62	1.49
B	Purshia tridentata	1	1	.03	.15
B	Symphoricarpos oreophilus	4	3	.15	.41
B	Tetradymia canescens	34	32	.81	.77
Total for Browse		218	248	25.65	30.29

BASIC COVER --
Herd unit 08A, Study no: 1

Cover Type	Nested Frequency		Average Cover %		
	'95	'00	'88	'95	'00
Vegetation	347	350	8.00	39.14	51.17
Rock	219	163	3.75	6.31	5.54
Pavement	266	257	18.50	13.45	18.63
Litter	388	361	57.00	47.96	43.00
Cryptogams	3	-	0	.00	0
Bare Ground	224	226	12.75	10.57	15.58

SOIL ANALYSIS DATA --
Herd Unit 8A, Study # 1, Study Name: Widdop Mountain South Slope

Effective rooting depth (inches)	Temp °F (depth)	pH	%sand	%silt	%clay	%0M	PPM P	PPM K	dS/m
12.83	59.2 (14.25)	6.6	72.0	13.4	14.6	7.0	19.6	208.0	0.6



PELLET GROUP FREQUENCY --
Herd unit 08A, Study no: 1

Type	Quadrat Frequency	
	'95	'00
Rabbit	1	1
Antelope	-	3
Moose	4	-
Elk	40	28
Deer	20	-
Cattle	-	2

Pellet Transect	
Pellet Groups per Acre	Days Use per Acre (ha)
'00	'00
131	N/A
44	4 (9)
165	9 (23)
853	66 (162)
191	15 (36)
17	2 (4)

BROWSE CHARACTERISTICS --
Herd unit 08A, Study no: 1

AGE	YR	Form Class (No. of Plants) 1	2	3	4	5	6	7	8	9	Vigor Class 1	2	3	4	Plants Per Acre	Average (inches) Ht.	Cr.	Total
Amelanchier alnifolia																		
S	88	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	95	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	00	1	-	-	-	-	-	-	-	-	1	-	-	-	20			1
Y	88	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	95	4	-	-	1	-	-	-	-	-	5	-	-	-	100			5
	00	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
M	88	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	0
	95	-	1	1	-	2	1	-	-	-	5	-	-	-	100	27	31	5
	00	1	-	1	-	2	-	-	-	-	4	-	-	-	80	20	28	4
D	88	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	95	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	00	-	-	-	-	-	2	-	-	-	2	-	-	-	40			2

% Plants Showing	Moderate Use	Heavy Use	Poor Vigor	%Change
'88	00%	00%	00%	
'95	30%	20%	00%	-40%
'00	33%	50%	00%	

Total Plants/Acre (excluding Dead & Seedlings)			Dec:	
	'88	0		0%
	'95	200		0%
	'00	120		33%

Artemisia frigida																		
S	88	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	95	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	00	2	-	-	-	-	-	-	-	-	2	-	-	-	40			2
Y	88	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	95	-	-	-	1	-	-	-	-	-	1	-	-	-	20			1
	00	1	-	-	2	-	-	-	-	-	3	-	-	-	60			3
M	88	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	0
	95	3	1	-	2	-	-	-	-	-	6	-	-	-	120	3	8	6
	00	10	-	-	1	-	-	-	-	-	11	-	-	-	220	2	6	11

% Plants Showing	Moderate Use	Heavy Use	Poor Vigor	%Change
'88	00%	00%	00%	
'95	14%	00%	00%	+50%
'00	00%	00%	00%	

Total Plants/Acre (excluding Dead & Seedlings)			Dec:	
	'88	0		-
	'95	140		-
	'00	280		-

AGE	YR	Form Class (No. of Plants) 1	2	3	4	5	6	7	8	9	Vigor Class 1	2	3	4	Plants Per Acre	Average (inches) Ht.	Cr.	Total
Artemisia nova																		
M	88	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	0
	95	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	0
	00	-	-	-	-	-	-	-	-	-	-	-	-	-	0	4	11	0
% Plants Showing		Moderate Use		Heavy Use		Poor Vigor									%Change			
	'88	00%		00%		00%												
	'95	00%		00%		00%												
	'00	00%		00%		00%												
Total Plants/Acre (excluding Dead & Seedlings)													'88		0	Dec:		-
													'95		0			-
													'00		0			-
Artemisia tridentata vaseyana																		
Y	88	2	-	-	-	-	-	-	-	-	2	-	-	-	133			2
	95	-	2	-	-	-	-	-	-	-	2	-	-	-	40			2
	00	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
M	88	3	-	-	-	-	-	-	-	-	3	-	-	-	200	9	15	3
	95	3	1	-	-	-	-	-	-	-	4	-	-	-	80	7	14	4
	00	2	3	-	-	-	-	-	-	-	5	-	-	-	100	8	15	5
D	88	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	95	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	00	-	2	-	-	-	-	-	-	-	1	-	-	1	40			2
% Plants Showing		Moderate Use		Heavy Use		Poor Vigor									%Change			
	'88	00%		00%		00%									-64%			
	'95	50%		00%		00%									+14%			
	'00	71%		00%		14%												
Total Plants/Acre (excluding Dead & Seedlings)													'88		333	Dec:		0%
													'95		120			0%
													'00		140			29%
Ceratoides lanata																		
M	88	-	1	-	-	-	-	-	-	-	1	-	-	-	66	5	4	1
	95	1	-	-	1	-	-	-	-	-	2	-	-	-	40	6	4	2
	00	-	-	-	-	-	-	1	-	-	1	-	-	-	20	9	11	1
% Plants Showing		Moderate Use		Heavy Use		Poor Vigor									%Change			
	'88	100%		00%		00%									-39%			
	'95	00%		00%		00%									-50%			
	'00	00%		00%		00%												
Total Plants/Acre (excluding Dead & Seedlings)													'88		66	Dec:		-
													'95		40			-
													'00		20			-

AGE	YR	Form Class (No. of Plants) 1	2	3	4	5	6	7	8	9	Vigor Class 1	2	3	4	Plants Per Acre	Average (inches) Ht.	Cr.	Total
Cercocarpus montanus																		
S	88	3	-	-	-	-	-	3	-	-	6	-	-	-	400			6
	95	2	-	-	-	-	-	-	-	-	2	-	-	-	40			2
	00	7	-	-	-	-	-	-	-	-	7	-	-	-	140			7
Y	88	12	17	9	5	1	-	13	-	-	56	-	1	-	3800			57
	95	41	15	-	3	-	-	-	-	-	59	-	-	-	1180			59
	00	29	33	10	4	-	-	-	-	-	76	-	-	-	1520			76
M	88	-	12	25	-	1	-	-	-	-	37	-	-	1	2533	26	38	38
	95	3	20	3	-	60	70	-	-	-	93	60	3	-	3120	31	50	156
	00	-	12	26	-	28	89	1	-	-	156	-	-	-	3120	23	37	156
D	88	-	1	5	-	-	-	-	-	-	6	-	-	-	400			6
	95	-	-	-	1	-	-	-	-	-	-	-	-	1	20			1
	00	1	1	7	-	1	16	-	-	-	19	-	-	7	520			26
X	88	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	95	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	00	-	-	-	-	-	-	-	-	-	-	-	-	-	20			1

% Plants Showing	Moderate Use	Heavy Use	Poor Vigor	%Change
'88	32%	39%	02%	-36%
'95	44%	34%	02%	+16%
'00	29%	57%	03%	

Total Plants/Acre (excluding Dead & Seedlings)				
	'88	6733	Dec:	6%
	'95	4320		0%
	'00	5160		10%

Chrysothamnus depressus

Y	88	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	95	1	-	-	-	-	-	-	-	-	1	-	-	-	20			1
	00	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0

% Plants Showing	Moderate Use	Heavy Use	Poor Vigor	%Change
'88	00%	00%	00%	
'95	00%	00%	00%	
'00	00%	00%	00%	

Total Plants/Acre (excluding Dead & Seedlings)				
	'88	0	Dec:	-
	'95	20		-
	'00	0		-

Chrysothamnus nauseosus hololeucus

M	88	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	0
	95	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	0
	00	1	-	-	-	-	-	-	-	-	1	-	-	-	20	-	-	1

% Plants Showing	Moderate Use	Heavy Use	Poor Vigor	%Change
'88	00%	00%	00%	
'95	00%	00%	00%	
'00	00%	00%	00%	

Total Plants/Acre (excluding Dead & Seedlings)				
	'88	0	Dec:	-
	'95	0		-
	'00	20		-

AGE	YR	Form Class (No. of Plants) 1	2	3	4	5	6	7	8	9	Vigor Class 1	2	3	4	Plants Per Acre	Average (inches) Ht.	Cr.	Total
Chrysothamnus viscidiflorus lanceolatus																		
Y	88	1	-	-	-	-	-	-	-	-	1	-	-	-	66			1
	95	8	-	-	-	-	-	-	-	-	8	-	-	-	160			8
	00	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
M	88	1	-	-	3	-	-	-	-	-	4	-	-	-	266	10	11	4
	95	31	-	-	2	-	-	-	-	-	33	-	-	-	660	9	12	33
	00	25	-	-	7	-	-	-	-	-	32	-	-	-	640	6	11	32
D	88	-	1	-	-	-	-	-	-	-	-	-	1	-	66			1
	95	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	00	1	-	-	-	-	-	-	-	-	1	-	-	-	20			1

% Plants Showing	Moderate Use	Heavy Use	Poor Vigor	%Change
'88	17%	00%	17%	+51%
'95	00%	00%	00%	-20%
'00	00%	00%	00%	

Total Plants/Acre (excluding Dead & Seedlings)				
'88	398	Dec:		17%
'95	820			0%
'00	660			3%

Eriogonum microthecum																		
S	88	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	95	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	00	3	-	-	-	-	-	-	-	-	3	-	-	-	60			3
Y	88	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	95	1	-	-	-	-	-	-	-	-	1	-	-	-	20			1
	00	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
M	88	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	0
	95	29	-	-	-	-	-	-	-	-	29	-	-	-	580	4	10	29
	00	18	-	-	1	-	-	-	-	-	19	-	-	-	380	4	7	19
D	88	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	95	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	00	2	-	-	-	-	-	-	-	-	1	-	-	1	40			2

% Plants Showing	Moderate Use	Heavy Use	Poor Vigor	%Change
'88	00%	00%	00%	
'95	00%	00%	00%	-30%
'00	00%	00%	05%	

Total Plants/Acre (excluding Dead & Seedlings)				
'88	0	Dec:		0%
'95	600			0%
'00	420			10%

AGE	YR	Form Class (No. of Plants) 1	2	3	4	5	6	7	8	9	Vigor Class 1	2	3	4	Plants Per Acre	Average (inches) Ht.	Cr.	Total
Gutierrezia sarothrae																		
S	88	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	95	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	00	12	-	-	-	-	-	-	-	-	12	-	-	-	240			12
Y	88	11	-	-	-	-	-	-	-	-	11	-	-	-	733			11
	95	1	-	-	-	-	-	-	-	-	1	-	-	-	20			1
	00	4	-	-	-	-	-	-	-	-	4	-	-	-	80			4
M	88	120	-	-	10	-	-	-	-	-	130	-	-	-	8666	7	5	130
	95	38	-	-	-	-	-	-	-	-	38	-	-	-	760	7	6	38
	00	118	-	-	1	-	-	-	-	-	119	-	-	-	2380	5	8	119
D	88	-	-	-	1	-	-	-	-	-	-	-	-	1	66			1
	95	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	00	3	-	-	-	-	-	-	-	-	2	-	-	1	60			3

% Plants Showing	Moderate Use	Heavy Use	Poor Vigor	%Change
'88	00%	00%	.70%	-92%
'95	00%	00%	00%	+69%
'00	00%	00%	.79%	

Total Plants/Acre (excluding Dead & Seedlings)				
	'88	9465	Dec:	1%
	'95	780		0%
	'00	2520		2%

Leptodactylon pungens																		
M	88	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	0
	95	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	0
	00	-	-	-	-	-	-	-	-	-	-	-	-	-	0	5	8	0

% Plants Showing	Moderate Use	Heavy Use	Poor Vigor	%Change
'88	00%	00%	00%	
'95	00%	00%	00%	
'00	00%	00%	00%	

Total Plants/Acre (excluding Dead & Seedlings)				
	'88	0	Dec:	-
	'95	0		-
	'00	0		-

Purshia tridentata																		
Y	88	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	95	-	1	-	-	-	-	-	-	-	1	-	-	-	20			1
	00	-	1	-	-	-	-	-	-	-	-	-	1	-	20			1

% Plants Showing	Moderate Use	Heavy Use	Poor Vigor	%Change
'88	00%	00%	00%	
'95	100%	00%	00%	+ 0%
'00	100%	00%	100%	

Total Plants/Acre (excluding Dead & Seedlings)				
	'88	0	Dec:	-
	'95	20		-
	'00	20		-

AGE	YR	Form Class (No. of Plants) 1	2	3	4	5	6	7	8	9	Vigor Class 1	2	3	4	Plants Per Acre	Average (inches) Ht.	Cr.	Total
Symphoricarpos oreophilus																		
Y	88	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	95	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	00	2	-	-	-	-	-	-	-	-	2	-	-	-	40			2
M	88	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	0
	95	3	-	-	1	-	-	-	-	-	4	-	-	-	80	8	21	4
	00	2	-	-	-	2	-	-	-	-	4	-	-	-	80	9	35	4

% Plants Showing	Moderate Use	Heavy Use	Poor Vigor	%Change
'88	00%	00%	00%	
'95	00%	00%	00%	+33%
'00	33%	00%	00%	

Total Plants/Acre (excluding Dead & Seedlings)				
	'88	0	Dec:	-
	'95	80		-
	'00	120		-

Tetradymia canescens																		
S	88	1	-	-	-	-	-	-	-	-	1	-	-	-	66			1
	95	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	00	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
Y	88	2	3	-	1	-	-	-	-	-	6	-	-	-	400			6
	95	4	-	-	-	-	-	-	-	-	4	-	-	-	80			4
	00	3	-	-	2	-	-	-	-	-	5	-	-	-	100			5
M	88	3	-	-	2	-	-	2	-	-	6	-	1	-	466	7	7	7
	95	51	2	-	7	-	-	-	-	-	60	-	-	-	1200	6	8	60
	00	39	5	2	4	-	-	-	-	-	50	-	-	-	1000	6	10	50
D	88	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	95	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	00	6	-	1	-	-	-	-	-	-	5	-	-	2	140			7

% Plants Showing	Moderate Use	Heavy Use	Poor Vigor	%Change
'88	23%	00%	08%	+32%
'95	03%	00%	00%	- 3%
'00	08%	05%	03%	

Total Plants/Acre (excluding Dead & Seedlings)				
	'88	866	Dec:	0%
	'95	1280		0%
	'00	1240		11%